



- Shipping documents have been received and processed as follows:***

WALLOPS PICK-UP/LOAD 0700 Thursday, July 10th - Freddie Bynum

AERODYNE	NOxyO3
AVOCET	PDS
CAR	PTR-MS
DACOM/DLH	TD-LIF
DFGAS	P-3B
LARGE2	

Langley PICK-UP/LOAD 1300 Thursday, July 10th - Luci Crittenden

ACAM
HSRL2
LARGE1
B200
HU-25

- The truck is due to arrive at the RAF in Bloomfield, CO on Monday, July 14th around 0900. Please have someone from your team ready to help unload at the RAF Hangar.***

As we prepare to start arriving in the field, here is a message from Dan Wolfe and Tom Ayers:

“Things are starting to dry out. I would encourage everyone to stay on the roads and out of grassy fields unless absolutely necessary. Exhaust and catalytic converters can be hot enough to start fires. We have tried to mow down some of the grass.”

First time visitors need to be sure to check in with Dan Wolfe (daniel.wolfe@noaa.gov) for BAO and Tom Ayers (thomas.ayers@noaa.gov) for Platteville

NREL-Golden electrical work and easement uncertainties:

We have good news that the transformer installation will be taking place in the next few days. We are checking to see how quickly we can get the electrical panels installed. Power may be a few days late, but still well in advance of the start date.

Security at BAO: Background check approval is still an issue and then we have to get the contract in place. It is possible that the first few days will not be guarded. Ideas? Can research groups rotate responsibility for an evening presence if this problem occurs?

To our knowledge, all other open items are well in hand.

Other issues?



Parking at RAF



Details from Cory Wolff (reference photo on next slide):

We have **65 spaces** that are in the main parking area here.

This area is not gate controlled between 0600 and 1800 Monday - Friday and is the best place for everyone involved with FRAPPE and DISCOVER-AQ to park.

When you need to arrive earlier than 0600 (most flight days) we will have someone here to open the gate for you and get you in the building.

Leaving after 1800 isn't an issue as the gate opens automatically when you drive up to it from inside.

65 spaces seems like a lot but if everyone drives their own vehicles it will fill up fast. We will be encouraging FRAPPE participants to carpool as well.

There is overflow parking in a gravel lot just off the map on the lower right that we can use if needed. It just means a bit of a walk over to RAF.

We also have an area next to our hangar with 30 more spots, but it is gate controlled all of the time, so we will be asking RAF staff to park over there during the project to free up the spaces for project participants.



DISCOVER-AQ

Today



June 2014 ▼



Week

Month

Agenda ▼

Sun	Mon	Tue	Wed	Thu	Fri	Sat
Jun 1	2	3	4	5	6	7
It is possible that the schedule will slip by one day (ECF on Tuesday), but this is not certain. Please do not alter your travel schedules.						
8	9	10	11	12	13	14
Herndon, Gatebe, Vanderlei Upload						
Anderson (LARGE), NSERC, Cohen Upload					Wisthaler, Fried, Yang, Barrick Upload	
15	16	17	18	19	20	21
Herndon, Gatebe, Vanderlei Upload						
Wisthaler, Fried, Yang, Barrick Upload				Weinheimer, Diskin Upload		
Anderson (CAPS) Upload						
22	23	24	25	26	27	28
Herndon, Gatebe, Vanderlei Upload			P3B FIIR	P3B FRR	P3B ATP	
Weinheimer, Diskin Upload						
29	30	Jul 1	2	3	4	5
P3B ECF		P3B PCF and pack days				

The PCF will be accomplished ASAP after a successful ECF, weather permitting (no rain, visual flight conditions).

As in previous campaigns, we will only have one check flight if everything goes well.

Do not expect maintenance time (other than the normal 3-hour preflight) on the day of the PCF. If you want more time with your instrument before the PCF, plan to arrive early. There should be some time on the day of the ECF (Monday, 30 June).

After the flight, we will need a sample of data (screen capture is sufficient) to demonstrate instrument readiness for the Mission Readiness Review.

- 1-Takeoff and climb to 17,500 feet (20-30 min)
- 2-Remain at altitude until investigators give the okay (expect 15-30 min)
- 3-Spiral descent to 1000 feet (20 min)
- 4-Remain at 1000 feet until investigators give the okay (expect 15-30 min)
- 5-Spiral up to 17,500 feet (20 min)
- 6-Return to base (20-30 min)

Other requests? Any need for a level leg at a medium altitude (say 10000 feet) on the return? Does NSERC need pitch and yaw maneuvers to calibrate their air motion sensor? Would it be worth doing a missed approach on the return? Is 2-2.5 hours long enough?

	Name	Instrument
1	Beyersdorf	LARGE
2	Corr	LARGE
3	Winstead	LARGE
4	Barrick	PDS
5	Aknan	PDS
6	Gatebe	CAR
7	Crawford	PI
8	Montzka	NOxyO3
9	Mueller	PTR-MS
10	Diskin	DACOM/DLH
11	Digangi	DACOM/DLH
12	Pusede	DACOM/DLH
13	Sachse	DACOM/DLH
14	Fried	DFGAS
15	Walega	DFGAS
16	Yang-Martin	AVOCET
17	Geiger	AVOCET
18	Wooldridge	TD-LIF
19	Sparks	TD-LIF
20	Herndon	Aerodyne
21	Buzay	NSERC

The PCF is currently oversubscribed by one person. Only 20 seats are available.

Please look closely and contact Jim Crawford with any corrections or additional requests.

Jim Crawford would prefer to be on the flight, but his seat can be negotiated for a price (Glenn...)

P-3B Transit Manifest

	Name	Instrument
1	Beyersdorf	LARGE
2	Corr	LARGE
3	Winstead	LARGE
4	Barrick	PDS
5	Gatebe	CAR
6	Rush	CAR
7	James	CAR
8	Weinheimer	NOxyO3
9	Mueller	PTR-MS
10	Geiger	AVOCET
11	Diskin	DACOM/DLH
12	Sachse	DACOM/DLH
13		
14		
15		
16		
17		
18		
19		
20		

It is still early, but Luci has a tentative manifest for the transit

The transit will NOT be a science flight, so it is not mandatory to operate instruments unless desired

TD-LIF has decided to not send anyone on the transit.

Still waiting to hear from DFGAS

Also need to know about preflight requirements for the transit.

Please communicate your needs to Luci (Lucille.H.Crittenden@nasa.gov)



B200 HSRL2 & ACAM Integration



- ***Current plan is for the HSRL2 to start integration on the B200 beginning June 30th and continue through July 3rd if needed.***
- ***ACAM integration will start just after the HSRL2 integration (HSRL2 has to go on first due to fit). ACAM could start as early as June 30th afternoon but mostly likely on July 1st.***
- ***Check-out flights will most likely start on July 7th and will be complete before July 10th (shipping day).***



Colorado Hotel Reservations



For those of you still trying to obtain hotel reservations, the “DISCOVER-AQ Block” with below per diem rates at the Broomfield TownPlace Suites is full; however, if you call the hotel directly (1-303-466-2200) and identify yourself as “DISCOVER-AQ with a government per diem rate”, the hotel still has some rooms at the current per diem rate (\$111).

Another option is the Renaissance Hotel (1-303-464-8400) next door to the TownPlace Suites. This hotel has very nice rooms and may still have government per diem rates to offer, but they do not have cooking facilities (some rooms may have a microwave, but you will have to ask).

Name	Spiral	Over-flight	Pandora	Aeronet	EPA NO2	Missed Approach	Lidars	Balloons	Comment
BAO Tower	X		2	X			NOAA-TOPAZ and HRDL, UW-HSRL, H2O DIAL		CSU, 3 mobile hookups, small sensors on tower
Chatfield Park	X		1	X	X				
Denver-LaCasa Ncore	X		1	X	X				
Fort Collins-West	X		1	X	X	500 feet	GSFC TOLNET-O3 MPL		
NREL-Golden	X		2	X	X		MPL, LaRC TOLNet-O3, and Leosphere	Tethersonde	Millersville also brings sodar, flux tower, nephelometer; Pandoras by EPA here, EPA ceilometer, UMBC trailer, NOAA profiler
Platteville	X		1	X	X		MPL	Ozonesondes	NATIVE; NOAA radiation; 3 mobile hookups; Pandora by NATIVE here; extra trailer for PTR-MS
Aurora East/DU-ARTI				X					Nothing extra planned for this site
Boulder		X	1	X					Pandora already at this location
CAMP		X							
I-25 Denver			1		X				near-road NO2 monitor
Niwot Ridge			1	X					
Rocky Flats - N		X	1	X					
Squaw Mtn			1	X					
Table Mountain		X	1	X					possible ozone monitor
Welch		X		X					
Weld Co. Tower		X	1	X	X				remote sensors on county building
Greeley-Weld Co. Airport						X			Missed approach along BL run
Parkland Airport						500 feet			Missed approach with BAO spiral

Early installation planned for Aeronet (April) and Pandora (June). Groups are working directly with Gordon Pierce at CDPHE.

The forecasting dry run will be on **1 July at 9am MDT**. If you are not in the loop and want to be, please contact Gabi Pfister (pfister@ucar.edu)



FRAPPE Field Catalog

Front Range Air Pollution and Photochemistry Experiment

Home Reports Status Satellite Radar Surface Upper-Air Advisory Aircraft Model Missions Tools & Links Help

The FRAPPE field catalog is now operational and digesting products: <http://catalog.eol.ucar.edu/frappe>

If you have products to submit please get in touch with Scot Loehrer (loehrer@ucar.edu).

DISCOVER-AQ will not maintain a report server for the Colorado deployment. The Field Catalog will be used to consolidate all project information.

Our flight tracker will still be available, but tracking flights and chat will be also be available through the catalog.

Current Reports

Chief Scientist Summary
Weather Discussion

Tools

Catalog Maps (GIS Tool)

Chatrooms

Help Documentation
Username:
Password:
catalog@eol.ucar.edu

DISCOVER-AQ

Deriving Information on Surface Conditions from Column and Vertically Resolved Observations Relevant to Air Quality

Colorado 2014

Texas 2013

California 2013

Baltimore-Washington, D.C. 2011

➔ Data Archive: DISCOVER-AQ

➔ Data Archive: FRAPPE (NCAR C130)



➔ P3-B Interactive Flight Tracks & Time / Profile Data Plotter

➔ P3-B Profile Summaries - Percentiles Plots

➔ P3-B Merged Data: Extract / Download one or more variables

➔ P3-B Aircraft Forward / Nadir Videos

➔ Submitted and Planned Publications **UPDATED!**



➔ FRAPPE: Related Links

➔ DISCOVER-AQ: Data Related Links

➔ View Reports: Outlook / Flight / Status / QuickLook

➔ Flight Profile Summary

➔ Flight / Profile Times: P3-B / B200

➔ Satellite Overpass Tracks

➔ Data Access & Other Data Sources

➔ ICARTT Data Format Document

➔ Data Management Plan

➔ Related Links & News

Recent Activities

- DISCOVER-AQ Science Team Meeting, 24-28 February 2014
H.J.E. Reid Conference Center, NASA LaRC (Login required)
- DISCOVER-AQ Team Meetings / Presentations / Telecons **UPDATED!**



The overarching objective of the DISCOVER-AQ investigation is to improve the interpretation of satellite observations to diagnose near-surface conditions relating to air quality. To diagnose air quality conditions from space, reliable satellite information on aerosols and ozone precursors is needed for specific, highly correlated times and locations to be used in air quality models and compared to surface- and aircraft-based measurements. DISCOVER-AQ will provide an integrated dataset of airborne and surface observations relevant to the diagnosis of surface air quality conditions from space. >> more

>> Overview (Crawford)

>> DISCOVER-AQ Science

Tools

• Data Scanning/Submittal

Help FScan

• Register PI dataIDs

This is required in order to upload data to the archive.

You can go directly to:

<https://www-air.larc.nasa.gov/cgi-bin/regid>

Or access through the link under “Tools” on the data archive site

Normal UserID/Password applies.

Questions should be addressed to Gao Chen and Ali Aknan.

dataIDs Registration for ICARTT Format Files

A dataID is the first part of an [ICARTT \[type\] data filename \(see the Data Format Document for details\)](#). Each dataID (per platform) must be unique.

DISCOVERAQ / FRAPPE Colorado 2014

IMPORTANT (PLEASE READ)

This registration is **ONLY** valid for the Platforms listed in the "Platform Box". Do **NOT** register if your platform is not listed. **YOUR "PLATFORM DATA MANAGER" IS RESPONSIBLE FOR YOUR DATA ARCHIVING NEEDS.**

The archive directory will be created from LastName.FirstName. Please enter PI name correctly. Also, if you have registered dataIDs before, they **WILL BE OVERWRITTEN** with the new registration. So, make sure you (re)enter **ALL** dataIDs. Each dataID represents a separate group of files in the PI data directory.

PI Last Name* : PI First Name* :

Platform* : Press Ctrl+Click to select multiple items

- P3B (NASA Aircraft)
- B200 (NASA Aircraft)
- C130 (NCAR Aircraft)
- MERGE
- MODEL
- ANALYSIS

dataID(s)* :

**Prepend dataIDs with "discoveraq-" OR "frappe-" separate dataIDs with semicolons*

Link to PI webpage, instrument, or experiment description document:

Optional: to display on LaRC Archive webpage

Text describing PI instrument or experiment (e.g., NASA LaRC DIAL - Troposphere O₃, Aerosols, and Clouds Profiles):

Optional: to display on LaRC Archive webpage

**Required (spaces will be removed)*

Current Registered dataIDs on the Server for DISCOVERAQ / FRAPPE Colorado 2014

PI Name: Last.First	LocationID	Registered dataIDs
BARRICK.JOHN (PI Link)	P3B	discoveraq-pds
YANG.MELISSA (PI Link)	P3B	discoveraq-co2
ANDERSON.BRUCE (PI Link)	P3B	DISCOVERAQ-LARGE-APS;DISCOVERAQ-LARGE-CAS;DISCOVERAQ-LARGE-CIP;DISCOVERAQ-LARGE-CNC;DISCOVERAQ-LARGE-LAS;DISCOVERAQ-LARGE-OPTICAL;DISCOVERAQ-LARGE-SMPS;DISCOVERAQ-LARGE-SP2;DISCOVERAQ-LARGE-

For those new to the process, a link to the Data Format document is provided.

New DataIDs will be needed for those working at ground sites since filenames are site specific.

Others can check the current registered IDs to make sure that they still apply.

FRAPPE & DISCOVER-AQ

Education Outreach Activities

- NCAR Research Aviation Facility Public Open House 8/2
- Know Your AQ: Discover Air Quality Professional Development Educator Workshop 8/6 & 8/7 at NCAR Mesa Lab
 - NASA DISCOVER-AQ Presentation/Live Chat
 - CDPHE Presentation
 - NCAR Air Quality Teaching Box
 - GLOBE Aerosols Protocol Training
 - Interactive sessions
 - Field Site visits to BAO, NOAA, RAF
- Citizen-Science Air Monitoring Hikes-coordinated with NCAR REU/SOARS in Boulder OSMP & RMNP
 - Mid-July through mid-August
 - POMs and CairClips
- Future Follow-Up EPO activities through March 31, 2015
 - Contact: jennifer.l.taylor@colorado.edu
 - Thank you!



Outreach Opportunity



Rachelle Duvall is organizing an exhibit at the Denver Museum of Nature and Science on Sunday, July 20 from 9am to 5pm. They are having a free day (free admission to the public) where they anticipate anywhere from 8,000-12,000 people. She is organizing some tables with hands-on outreach activities and will be distributing information (e.g., the info cards) on FRAPPE and DISCOVER-AQ as well as the info on the open house.

Folks interested in volunteering should contact her at Duvall.Rachelle@epa.gov (Note: We cannot promise that this will not happen on a flight day)

Also let her know if you have any other handouts or ideas to contribute.

Rachelle has also secured space at the museum for us to place an interactive kiosk for the duration of the campaign. Current thoughts are to provide access to DISCOVER-AQ and FRAPPE videos, AirNOW forecasts, the flight tracker, the Know Your Earth Quiz, and other material.

If you have any suggestions, please pass them along to Amber Richards at Amber.L.Richards@nasa.gov



Tour of Ball Aerospace



Bill Good has graciously offered to arrange a tour of their facility in Boulder.

Depending on the schedule, the tour may include JWST aft optics bench, JPSS, the large membrane optics program called MOIRE, and Ball's Environmental testing facility.

Since we have an unpredictable schedule, this would be tentatively set for a no fly day during the week of 28 July. We would like a rough headcount and there is a requirement for information on Foreign Nationals to obtain clearance for the tour.

If you are interested, please contact Bill (wgood@ball.com), and include whether you are a US citizen or foreign national. For specific questions, you can call Bill at 303-939-5308.

Our session proposals have been accepted and are ready to accept abstracts

Abstract submission deadline: 6 August

Assessing Aerosol Vertical Distribution Impacts on Air Quality and Radiative Forcing: Insight from In Situ Measurements, Remote Sensing and Modeling

Conveners: Andreas Beyersdorf, Arlindo da Silva, Richard Ferrare, Luke Ziemba

Regional and Urban Scale Variability of Ozone and Its Precursors in the Mixed Layer and Lower Free Troposphere

Conveners: Gary Morris, Mike Newchurch, Christopher Loughner, Mark Estes

While we want to make sure that these sessions are well subscribed, there are at least 11 other sessions where some of our abstracts might find a home. It would be nice to see our work broadly applied as in past meetings.



Future Telecons



2 July – this is the Wednesday after the Project Check Flight

TBD for subsequent dates